

REMARKS

Applicants respectfully request the Examiner to reconsider and again examine the claims as amended herein in view of the remarks below.

Claims 1-15, 17, 19-20 and 24-29 are pending in the application. Claims 1-20 and 24-29 are rejected. Claims 1, 2, 5-15, 17, 19-20, 25, 27, and 29 are amended herein. Claims 16 and 18 are cancelled herein without prejudice. Claims 21-23 were previously canceled.

Applicant's attorney would like to thank Examiner Brier for the courtesy extended to Applicant's attorney during the telephone interview on May 8, 2007. The claimed invention was generally discussed. The reference referred to below as the Jazz article was also discussed. The claimed invention was contrasted with the Jazz article and with Applicant's admitted prior art. An application programming interface (API) specially tailored for the claimed invention was discussed. The API has been introduced into all of the independent claims herein.

The Rejections under 35 U.S.C. §103(a)

In the Office Action dated, December, 2007, The Examiner maintains his rejection of Claims 1-20 and 24-29 under 35 U.S.C. §103(a) as being unpatentable over an article entitled "Jazz: An Extensible Zoomable User Interface Graphics Toolkit," (hereinafter the "Jazz article"), in view of the Applicant's admitted prior art pertaining to three-dimensional graphics circuit cards.

Applicant submit that amended Claim 1 is patentably distinct over the Jazz article, whether taken alone or in combination with the Applicant's admitted prior art, since the cited references neither describe nor suggest "... providing an application programming interface associated with a three-dimensional graphics card, the application programming interface to process at least two-dimensional scene graph commands; generating at least one two-

dimensional scene graph object command to create a respective at least one two-dimensional object; receiving the at least one two-dimensional scene graph object command with the application programming interface; generating two-dimensional scene graph data in accordance with the receiving the at least one two-dimensional scene graph object command, the two-dimensional scene graph data including the at least one two dimensional object; storing the two-dimensional scene graph data as part of a scene graph data group in a local memory disposed upon a three-dimensional graphics circuit module coupled to the central processing unit, wherein the three-dimensional graphics circuit module includes a local processor coupled to the local memory; generating a two-dimensional scene graph display command to render the at least one two-dimensional object; interpreting the two-dimensional scene graph display command with the three-dimensional graphics circuit module; and rendering at least one two-dimensional image on the graphical display with the local processor in accordance with the interpreting, wherein the at least one two-dimensional image is derived from the at least one two-dimensional object stored in the local memory...." as set forth in Claim 1.

As made of record in the response filed on September 18, 2006, during a telephone interview which took place on or about September 15, 2006, the Examiner and Applicant agreed that the "admitted prior art" relied upon by the Examiner in this and past Office Actions corresponds to the position that three-dimensional data is stored in a three-dimensional graphics circuit module. It has also been agreed that the admitted prior art does not include any indication that two-dimensional scene graph data is stored in a three-dimensional graphics circuit module.

As made of record in the response filed September 30, 2005, Applicants submit that the Jazz article generates a two-dimensional scene graph, which is a software structure, but renders the scene graph with a Java2D renderer, which is known to provide only primitive "paint" commands in order to render the two-dimensional images of the Jazz article by way of the computer CPU. The Jazz article does not describe or suggest storage of two-dimensional scene graph data in a local memory disposed upon a three-dimensional graphics circuit module or rendering with a local processor disposed upon the three-dimensional graphics circuit module.

As an initial matter, Applicants submit that it is not possible to directly combine the two-dimensional scene graph of the Jazz article with a prior art three-dimensional graphics circuit module, the combination suggested by the Examiner. At least a special application programming interface (API) (see, e.g., FIG. 2) must be specially tailored to enable this combination, as supported at page 9, lines 26-29. To this end, amended Claim 1 recites, “...providing an application programming interface associated with a three-dimensional graphics card, the application programming interface to process at least two-dimensional scene graph commands...,” which is not described or suggested by either the Jazz article or by Applicant’s admitted prior art.

With respect to the Jazz article, the Examiner asserts in the Advisory Action dated March 21, 2007, that the Jazz article at pages 174 and 174 ”teaches that a 2D scene graph is a desirable way to render 2D objects by using a techniques used to render 3D objects.” The Examiner further asserts that “[t]his suggests modifying a three-dimensional graphics circuit-board to handle 2D scene graphs in addition to 3D scene graphs.”

As made of record in the response filed on March 8, 2007, OpenGL, used by the Examiner, supports a direct (or immediate) mode, described again more fully below. In the Advisory Action, the Examiner further asserts that this mode “does not teach away from the position the Jazz article suggests modifying a three-dimensional graphics circuit-board to handle 2D scene graphs in addition to 3D scene graphs because the additional modes of Open GL does not overcome the fact the Jazz article teaches processing 2D objects by using 2D scene graphs in a manner similar to processing 3D objects by using 3D scene graphs at pages 173 and 174... .”

Regarding the Examiner’s first two assertions, that the Jazz article at pages 174 and 174 ”teaches that a 2D scene graph is a desirable way to render 2D objects by using a techniques used to render 3D objects,” and that “[t]his suggests modifying a three-dimensional graphics circuit-board to handle 2D scene graphs in addition to 3D scene graphs,” Applicants respectfully

disagree. The three-dimensional graphics circuit module is not modified in the present invention, nor is such modification suggested in the Jazz article. Instead, in the present invention, the application programming interface (API) is specially tailored to process at least two-dimensional scene graph commands. The Jazz article only suggests using OpenGL. Applicants submit that merely suggesting OpenGL suggests nothing about the hardware or methods used to do the rendering of 2D objects with OpenGL. Applicants submit that a specially tailored API is not described or suggested by the Jazz article or by Applicant's admitted prior art.

Applicants also submit that, in accordance with Claim 1, storing the two-dimensional scene graph data to a local memory disposed on the three-dimensional circuit module is not contemplated by the Jazz article or by Applicant's admitted prior art, and rendering a two-dimensional image derived from the two-dimensional scene graph data with a local processor disposed upon the three-dimensional circuit module is also not contemplated by the Jazz article or by Applicant's admitted prior art.

As described above, Open GL has a direct (or immediate) mode, which does not store two-dimensional scene graph data as part of a scene graph data group in a local memory disposed upon a three-dimensional graphics circuit module. Instead, when in the direct mode, OpenGL operates much like known "paint" commands, which employ a CPU in a computer to do the rendering.

Furthermore, as the Examiner may be aware, at the time of the present invention, which has priority to at least July 12, 2002, many computers contained three-dimensional graphics circuit modules (i.e., circuit cards) that did not have local memory disposed on the three-dimensional graphics circuit modules at all. For those systems, existing OpenGL emulated the various functions of OpenGL by using the CPU and main memory of the computer.

Applicants point out the similarity between the Examiner's reasoning set forth in his assertions above, and an inherency argument, which is described in detail in the Manual of Patent Examining Procedure (MPEP) §2112. Without using the word inherent, it appears that the Examiner is setting forth an inherency argument by suggesting that the Jazz article, in merely mentioning OpenGL, leads one to the conclusion that the Jazz article "...suggests modifying a three-dimensional graphics circuit-board to handle 2D scene graphs... ." Applicants have offered two architectures above, for which this would not be true.

According to the Manual of Patent Examining Procedure (MPEP) §2112, the Examiner has the burden of proof to establish inherency. As the Examiner is well aware, the fact that a certain characteristic *may* be present in the prior art is not sufficient to establish inherency. Therefore, Applicants respectfully assert that, because OpenGL can be used without storage of scene graph data in a local memory on the three-dimensional graphics circuit module, and because such use is not taught by the Jazz article, the Examiner has not met the required burden of proof for inherency.

The Examiner repeatedly concludes in the Office Action dated December 8, 2006, that the Jazz article suggests modifying the three-dimensional circuit module. This conclusion, however, is totally unsupported. As described above, the mere fact that the prior art *could* be modified to achieve the claimed invention is not sufficient to establish a prima facie case of obviousness.

The Jazz article focuses on the use of simple "paint" commands to render two-dimensional (2-D) images. Thus, a fair reading of the Jazz reference as a whole, clearly can only lead one to conclude that the brief mention to OpenGL in the Jazz Article refers to the use of OpenGL's above-described "direct mode," in which scene graph data is not stored to a three-dimensional graphics card nor rendered by a local processor.

As the Examiner is aware, and as found in MPEP §2142, in order to establish a prima facie case of obviousness "...the prior art reference (or prior art references when combined) must teach or suggest all the claim limitations." Applicants respectfully submit that the Examiner has not met this burden in order to establish prima facie obviousness.

The Examiner fails to point out where any of the recited elements of Claim 1 are mentioned in the cited reference. It appears that Examiner asserts that all eight of the claimed steps of Claim 1 are merely suggested rather than taught by the Jazz article. This suggests that the Examiner is using impermissible hindsight in order to assert obviousness.

Applicant further submits again that the Jazz article teaches away from the arrangement suggested by the Examiner, since the Jazz article, at the top of the second column of page 173 states "[t]ypical 3D renderers, such as OpenGL...do not have direct support for high quality scalable fonts, 2D complex polygons, line styles, and other standard business graphics." The Jazz article also states "...many of the nodes found in 3D scene graph systems are not appropriate." Therefore, the Jazz article teaches a different solution, Java2D, in order to render two-dimensional objects.

In view of the above, Applicant submits that Claim 1 is patentably distinct over the Jazz article, whether taken alone or in combination with Applicant's admitted prior art.

Claims 2-7, 24, and 25 depend from and thus include the limitations of Claim 1. Thus, Applicant submits that Claims 2-7, 24, and 25 are patentably distinct over the cited references at least for the reasons discussed above in conjunction with Claim 1.

For reasons described above in conjunction with Claim 1, Applicant submits that amended independent Claim 8 is patentably distinct over the Jazz article, whether taken alone or in combination with the Applicant's admitted prior art, since the cited references neither describe nor suggest "...instructions for providing an application programming interface associated with

a three-dimensional graphics card, the application programming interface to process at least two-dimensional scene graph commands; instructions for generating at least one two-dimensional scene graph object command to create a respective at least one two-dimensional object; instructions for receiving the at least one two-dimensional scene graph object command with the application programming interface; instructions for generating two-dimensional scene graph data in accordance with the receiving the at least one two-dimensional scene graph object command, the two-dimensional scene graph data including the at least one two dimensional object; instructions for storing the two-dimensional scene graph data as part of a scene graph data group in a local memory disposed upon a three-dimensional graphics circuit module coupled to the central processing unit, wherein the three-dimensional graphics circuit module has a local processor coupled to the local memory; instructions for generating a two-dimensional scene graph display command to render the at least one two-dimensional object; instructions for interpreting the two-dimensional scene graph display command with the three-dimensional graphics circuit module; and instructions for rendering at least one two-dimensional image on the graphical display with the local processor in accordance with the instructions for interpreting, wherein the at least one two-dimensional image is derived from the at least one two-dimensional object stored in the local memory," as set forth in Claim 8.

Claims 9-14, 26, and 27 depend from and thus include the limitations of Claim 8. Thus, Applicant submits that Claims 9-14, 26, and 27 are patentably distinct over the cited references at least for the reasons discussed above in conjunction with Claim 8.

For reasons described above in conjunction with Claim 1, Applicant submits that amended independent Claim 15 is patentably distinct over the Jazz article, whether taken alone or in combination with the Applicant's admitted prior art, since the cited references neither describe nor suggest "...a radar for providing radar data representative of an aircraft, wherein the radar data includes a range, an elevation, and an azimuth position of the aircraft, and wherein the radar data includes a radar-data identifier that associates the radar data with the aircraft; a display processor having a scene graph command generator for generating a two-dimensional scene

graph object command to create a respective two-dimensional object representative of the aircraft, and also for generating a two-dimensional scene graph display command to render a two-dimensional image representative of the two-dimensional object, wherein the display processor includes an association processor to: receive the radar data; and to associate the radar data with the two-dimensional object representative of the aircraft; *an application programming interface associated with a three-dimensional graphics card, the application programming interface to process at least two-dimensional scene graph commands; and a three-dimensional graphics circuit module coupled to the display processor and to the application programming interface, wherein the three-dimensional graphics circuit module includes a local memory disposed thereon and a local processor coupled to the local memory, wherein the three-dimensional graphics circuit module stores the two-dimensional scene graph data as part of a scene graph data group in the local memory, wherein the three-dimensional graphics circuit module interprets the two-dimensional scene graph display command, wherein the three-dimensional graphics circuit module generates the graphical display via the local processor in response to the generation of the two-dimensional scene graph display command, resulting in a display of at least one two-dimensional image on the graphical display, wherein the at least one two-dimensional image is derived from the at least one two-dimensional object stored in the local memory,*" as set forth in Claim 15.

Claims 17, 19-20, 28, and 29 depend from and thus include the limitations of Claim 15. Thus, Applicant submits that Claims 17, 19-20, 28, and 29 are patentably distinct over the cited references at least for the reasons discussed above in conjunction with Claim 15. Claims 16 and 18 are canceled herein without prejudice.

In view of the above, Applicant submits that the rejection of Claims 1-20 and 24-29 under 35 U.S.C. §103(a) should be removed.

In view of the above Remarks, Applicant submits that the claims and the entire case are in condition for allowance and should be sent to issue and such action is respectfully requested.

The Examiner is respectfully invited to telephone the undersigning attorney if there are any questions regarding this Response or this application.

The Assistant Commissioner is hereby authorized to charge payment of any additional fees associated with this communication or credit any overpayment to Deposit Account No. 500845, including but not limited to, any charges for extensions of time under 37 C.F.R. §1.136.

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Respectfully submitted,

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